State Water Board PFAS Order Compliance Workshop | Part 2

October 28, 2020

Introduction

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Resources & Information

- Compliance Workshop Part 1 – September 16, 2020
  - Videos & slide decks archived: https://casaweb.org/calendar/speaker-presentations/
  - Chat Questions submitted to the SWB

- Compliance Workshop Part 2 – October 28, 2020
  - Post-workshop e-mail with materials forthcoming

- State Water Board Resources
  - FAQ here (last updated 9/2020, new update expected next week)
  - Sampling Guidelines for Nondrinking Water here (released 9/2020)
  - ELAP Accredited Labs listed here (last updated 10/2020)
## Status of PFAS Orders

<table>
<thead>
<tr>
<th></th>
<th>Drinking Water Wells</th>
<th>Airports</th>
<th>Landfills</th>
<th>Chrome Platers</th>
<th>POTWS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issued Date</strong></td>
<td>March 2019</td>
<td>March 2019</td>
<td>March 2019</td>
<td>October 2019</td>
<td>July 2020</td>
</tr>
<tr>
<td><strong>Number of Orders</strong></td>
<td>-</td>
<td>30</td>
<td>196</td>
<td>271</td>
<td>259</td>
</tr>
<tr>
<td><strong>Order Timeframe</strong></td>
<td>Quarterly/1-yr</td>
<td></td>
<td>One-time sampling event</td>
<td>Quarterly/1-yr</td>
<td></td>
</tr>
<tr>
<td><strong>Number of Sites Sampled (as of 6/2020)</strong></td>
<td>611</td>
<td>15</td>
<td>138</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong># of Samples Collected</strong></td>
<td>2,400+</td>
<td>30</td>
<td>196</td>
<td>TBD</td>
<td>5,200+</td>
</tr>
<tr>
<td><strong>% PFAS Detected</strong></td>
<td>100</td>
<td>97</td>
<td></td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td><strong>Matrices Sampled</strong></td>
<td>soil, groundwater, surface water</td>
<td>groundwater, leachate</td>
<td>soil, groundwater, surface water, effluent wastewater</td>
<td>influent and effluent wastewater, biosolids, reverse osmosis concentrate, groundwater monitoring wells</td>
<td></td>
</tr>
<tr>
<td><strong>Est. Completion Date of Sampling</strong></td>
<td>June 2020</td>
<td>Late 2020</td>
<td>Early 2021</td>
<td>2021</td>
<td>Late 2021</td>
</tr>
</tbody>
</table>
Overarching Issues to Balance

- Source Control / Engineering High-Energy, High-Cost Solutions
- Ubiquitous Contaminants / Product Stewardship
- Presence-Absence / Contaminated-Background
- Approved Methods / User-Defined Methods
Issue Balancing: Source Control / Engineering High-Energy, High-Cost Solutions

- “An ounce of prevention is worth a pound of cure.”

- Contaminants are not destroyed by advanced treatment, only transferred to another matrix.

- We cannot treat our way out of these issues.
Issue Balancing: Ubiquitous Contaminants / Product Stewardship

PFASs exposure is a health concern
PFASs exposure is a health concern

National Health and Nutrition Examination Survey (NHANES) survey cycle (2-year increments)
Issue Balancing: 
Presence-Absence / Contaminated-Background

Background level in drinking water

\[ [PFOA]_{DW} = 1.3 \text{ ng/L} \]

- Drinking water
- Consumer articles
- Precursors (FTOHs)
- House dust
- Diet
Issue Balancing: Presence-Absence / Contaminated-Background

Background level in drinking water

$[\text{PFOA}]_{\text{DW}} = 1.3 \text{ ng/L}$

- Drinking water
- Consumer articles
- Precursors (FTOHs)
- House dust

Contaminated drinking water

$[\text{PFOA}]_{\text{DW}} = 519 \text{ ng/L}$

- Drinking water
- Consumer articles
- Precursors (FTOHs)
- House dust
- Diet

Vestergren & Cousins, ES&T, 2009. DOI: 10.1021/es900228k
Issue Balancing: Approved Methods / User-Defined Methods

“EPA's criteria for certifying a new standard method, pursuant to 40 CFR Part 136, requires a thorough demonstration of accuracy, precision, method detection levels, representativeness, comparability and availability for the proposed analytical procedure.”
Thank you!

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